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and, as this is true for every month of the year, it follows that, if there is any pneumonia which is infectious, it is absolutely dependent upon those meteorological conditions for its action upon the human organism.

In the paper to which I have referred, I have advanced a theory of the causation of pneumonia consistent with the facts demonstrated; and, briefly outlined, it is as follows: Air expired from the human lungs is nearly saturated with vapor of water at a temperature of about 98° F., and this contains about 18.69 grains of vapor in each cubic foot. The quantity of vapor exhaled is at all times greater than the quantity inhaled; but when the air is very cold and dry, the quantity exhaled is excessive, as may be seen when we reflect that air at 32° F. can contain in each cubic foot only about two grains of vapor. The fluid which passes out from the blood into the air-cells of the lungs, and which normally keeps them moist, contains some of the salts of the blood; and the chloride of sodium, not being volatile, is mostly left in the air-cells when the vapor passes out with the expired air. When the air inhaled is excessively dry (as it always is when excessively cold), this salt collects in the air-cells of the lungs in considerable proportion. This is proved by my statistics, which show the increase of pneumonia at such times, taken in connection with the fact that chloride of sodium in the lungs is in excess in pneumonia, which was proved in 1851 by Lionel S. Beale, M.D., of London, England. Dr. Beale also verified the observations by Redtenbacher, made in 1850, that during the onward progress of pneumonia the chlorides disappear from the urine, and reappear when convalescence has been established. In the air-cells, the chlorides are irritating when they become concentrated; but the exudation of fibrine, which is the most prominent condition in pneumonia, is probably favored by a fact in osmosis which is not generally well understood, —namely, that albumen, which it is usually considered will not pass by osmosis, will pass through an animal membrane to a solution of chloride of sodium.

Thus the causation of pneumonia by the inhalation of cold dry air seems to be completely worked out. As a cause of deaths, pneumonia is one of the most important diseases. It is hoped that its prevention may now begin.

HENRY B. BAKER.

Lansing, Mich., Aug. 17.

The sweating sickness.

In Hume's 'History of England,' volume ii., p. 384, appears the following passage: "There raged at that time, in London and other parts of the kingdom, a species of malady unknown to any other age or nation, the 'sweating sickness,' which occasioned the sudden death of great multitudes, though it seemed not to be propagated by any contagious infection, but arose from the general disposition of the air and of the human body. In less than twenty-four hours the patient commonly died, or recovered; but when the pestilence had exerted its fury for a few weeks, it was observed, either from alterations in the air or from a more proper regimen which had been discovered, to be considerably abated."

The time of this endemic must have been about the summer of 1485, just a short time previous to the coronation of Henry VII. The historian makes no further mention as regards the nature of this malady;

in fact is distressingly concise in his account of so interesting a disorder.

Now, the object of my letter is apparent: I wish a little more definite information concerning this so-called 'sweating sickness.' But if perchance, in my ignorance, I am inquiring about a disease the name of which is synonymous with one at present in existence, then the modern name will be all-sufficient.

E. W. EVANS.

Easton, Penn., Aug. 16.

[The 'sweating sickness' to which our correspondent refers prevailed in England during portions of both the fifteenth and sixteenth centuries; appearing for the first time in 1485, again in 1506, for the third time in 1517, and twice subsequently, in 1528 and 1551. During this last visit, it appeared in London July 7, and during the twenty-three days that it remained caused nearly a thousand deaths. The disease was in the nature of a fever, followed by sweating; commencing with pains throughout the body, flushes of heat, oppression at the stomach, and delirium, after which, a profuse perspiration of an offensive odor. Relapses were apt to occur, sometimes as many as twelve in number. Some regarded the disease as a rheumatic fever, others as a form of ague, and others still as an influenza. The first appearance of the disease, in 1485, was traced to the army that fought at Bosworth; the second, of 1517, occurred when London was crowded with foreign artisans; and that of 1528 was coincident with the great military operations of Francis I. in Italy. At the time the sweating sickness prevailed in England, that country was ravaged by diseases and pestilences of almost every name. Spotted fever, brain fever, epidemic flux, scurvy, diphtheria, small-pox, measles, scarlet fever, and erysipelas, — all figured largely as mortality factors during these two centuries.

That England was not blotted out of existence by pestilential disease during this epoch is a marvel. Houses were constructed without any regard to ventilation; the floors were made of loam covered with rushes, which were not removed, but were covered with others from time to time, until the deposit of twenty years and more had accumulated, — containing bones, broken victuals, and all manner of filth, and saturated with the discharges of man and beast. The streets were in the same condition, the filth being thrown into them from the houses. Of this condition of things Erasmus wrote, "If, even twenty years ago, I had entered into a chamber which had been uninhabited for some months, I was immediately seized with a fever." Add to this the gluttony and intemperance of the English people of this time, and some faint idea may be obtained of the influences at work to undermine the constitutions of our ancestors and prepare them for epidemic disease whenever it should appear. If our correspondent desires to study this disease in detail, he will find a full account in the following works: 'Historia regni Henrici, septimi regis Angliæ, vol. ix. of the works of Francis Bacon; 'The epidemics of the middle ages,' J. F. C. Hecker, M. D., published by the Sydenham society; 'A boke or counsell against the disease commonly called the sweat or sweating sickness, made by Jhon Caius, doctour in physicke, 1552' (appendix to Hecker's 'epidemics of the middle ages'). A very admirable résumé of this epidemic disease, and of others, will be found in 'Public health,' by Wm. A. Grey, M. B., published by Henry Renshaw, London. — ED.]